



Original Research

The Relationship Between the Educational Level of Couples in Premarital Stage and Their Knowledge of Healthy Pregnancy Preparation

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Abstract

Knowledge of prospective couples regarding healthy pregnancy preparation is an essential factor in promoting maternal and child health. Educational attainment is widely recognized as a determinant of health literacy, including the ability to understand nutritional requirements, routine health examinations, and risk management during pregnancy. This study employed an analytical cross-sectional design involving 58 prospective brides and grooms who participated in premarital counseling at the Office of Religious Affairs (KUA) in Haruai District, Tabalong Regency. Data were collected using structured questionnaires assessing educational level and knowledge of healthy pregnancy preparation. Statistical analysis was performed using the chi-square test with a 5% significance level. The findings demonstrated a significant relationship between educational level and knowledge of healthy pregnancy preparation ($p = 0.002$). Respondents with higher educational backgrounds showed better knowledge in areas related to nutrition, antenatal health check-ups, and pregnancy risk management. Education plays a pivotal role in shaping health literacy among prospective couples. Strengthening premarital counseling with adaptive and interactive materials tailored to diverse educational backgrounds is recommended to enhance preparedness for a healthy pregnancy.

1. Introduction

Maternal and child health is one of the primary indicators used to assess the quality of a nation's healthcare system. Indonesia continues to face significant challenges in maternal health, particularly in reducing the maternal mortality ratio (MMR) and the infant mortality rate (IMR) (Amalia et al., 2024). According to the 2022 Indonesia Demographic and Health Survey (IDHS), the maternal mortality ratio (MMR) in Indonesia reached 305 per 100,000 live births, which remains far above the target set by the Sustainable Development Goals (SDGs), namely 70 per 100,000 live births (Sri Pancawati, 2023). One of the efforts to reduce maternal mortality is by ensuring maternal health before and during pregnancy through comprehensive preparation, including physical, mental, and knowledge-related aspects of pregnancy (Sari & Anggraeni, 2023). In this context, healthy pregnancy preparation plays a crucial role

in ensuring a safe pregnancy and reducing the risk of complications that may endanger both the mother and the baby (Rika Listyowati, 2024).

Healthy pregnancy preparation encompasses various aspects, ranging from an understanding of proper nutrition and the importance of routine antenatal check-ups to knowledge of potential health risks during pregnancy (Supiyah & Mesalina, 2022). Couples in the premarital stage who possess better knowledge of these aspects are more likely to be prepared to maintain their health and reduce the potential for complications during pregnancy (Rohmatika et al., 2022). Premarital counseling conducted by the Office of Religious Affairs (KUA) in various regions of Indonesia, including Haruai District, Tabalong Regency, serves as an important platform for delivering information related to healthy pregnancy preparation. This counseling is expected to provide prospective couples with essential knowledge regarding the importance of preparing for pregnancy optimally. However, the effectiveness of premarital counseling in enhancing the understanding of couples in the premarital stage is strongly influenced by their educational level (Utami et al., 2020).

An individual's educational level plays a crucial role in shaping their understanding and attitudes toward various aspects of health, including healthy pregnancy preparation (Herizasyam, 2016). A study conducted by Ekawati et al. (2020) showed that individuals with higher educational levels tend to have better knowledge of reproductive health and pregnancy. This is attributed to easier access to information sources, a greater ability to comprehend complex health materials, and a stronger tendency to seek additional health-related information (Hartini, 2022). On the other hand, individuals with lower educational levels may encounter difficulties in understanding health information delivered during premarital counseling at the Office of Religious Affairs (KUA) (Nurlinda & Sari, 2021). This condition may lead to disparities in the knowledge and understanding of couples in the premarital stage regarding healthy pregnancy preparation, which in turn has the potential to affect the quality of maternal and child health in the future (Firda et al., 2021).

In the Indonesian context, premarital counseling at the Office of Religious Affairs (KUA) often serves as the only opportunity for couples in the premarital stage to obtain basic information on reproductive health and pregnancy preparation (Evrianasari & Dwijayanti, 2019). Data from the Ministry of Religious Affairs of the Republic of Indonesia (2022) indicate that more than 80% of couples in the premarital stage in Indonesia participate in premarital counseling at the Office of Religious Affairs (KUA). However, the effectiveness of this program in improving participants' knowledge remains highly dependent on their educational background (Arsyad et al., 2022). A study by Wulandari and Kartika (2021) in West Java showed that 60% of couples in the premarital stage with education below senior high school had low understanding of the importance of pre-pregnancy health examinations, whereas 75% of those with higher education demonstrated better understanding of this matter. This study indicates a correlation between educational level and knowledge of couples in the premarital stage regarding healthy pregnancy preparation, which should be taken into account in the implementation of premarital counseling.

In Haruai District, Tabalong Regency, similar studies remain limited. According to data from the Tabalong District Health Office (2023), the educational levels of the community in Haruai show significant variation, with the majority of couples in the premarital stage attending premarital counseling having lower secondary educational backgrounds. This situation presents a particular challenge in delivering health information, as couples with lower education may require more adaptive and easily comprehensible methods of communication. Furthermore, preliminary interviews with KUA officers in Haruai District indicated that many couples still do not fully understand the importance of healthy pregnancy preparation, despite having attended premarital counseling. This highlights a gap between the materials delivered during counseling and the level of understanding acquired by couples, which is most likely influenced by differences in educational attainment. Previous studies conducted in various developing countries have shown that education serves as an important determinant in the understanding of reproductive health.

A study in Nepal by Pradhan et al. (2019) revealed that women with higher education were twice as likely to undergo routine antenatal check-ups compared to those with lower educational attainment (Astuti et al., 2023). This finding is relevant to the Indonesian context, where couples in the premarital stage with lower education still face limitations in accessing adequate health information (Rahmanindar et al., 2021). With these data, it is expected that the Office of Religious Affairs (KUA) in Haruai District can design premarital counseling strategies that are more adaptive and tailored to the needs of couples from diverse educational backgrounds. In addition, the findings of this study may provide valuable input for the Tabalong District Health Office in developing more inclusive reproductive health programs, ensuring that couples across all levels of education have equal opportunities to understand the importance of pregnancy preparation.

2. Research Method

Study Design and Setting

This study applied a cross-sectional quantitative analytic design to examine the relationship between educational level and knowledge of healthy pregnancy preparation among couples in the premarital stage. The research was conducted at the Office of Religious Affairs (KUA), Haruai District, Tabalong Regency, Indonesia, from April to September 2024. This setting was selected as KUA is the main institution providing premarital counseling, making it relevant to the research focus.

Population and Sampling

The study population comprised all 68 couples attending premarital counseling at KUA Haruai during the study period. Using purposive sampling with inclusion criteria (minimum age of 20 years, willingness to participate, and an identifiable educational background), a sample size of 58 respondents was determined based on Slovin's formula.

Variables and Measurement

The independent variable was educational level, categorized into low (elementary/junior high school), middle (senior high school), and high (higher education). The dependent variable was knowledge of healthy pregnancy preparation, assessed through a structured questionnaire covering nutrition, pre-pregnancy health check-ups, immunization, and pregnancy-related health risks. Each correct answer was scored as 1 and incorrect answers as 0, with higher scores indicating better knowledge.

Data Collection Procedures

Data collection was carried out in coordination with KUA officials during premarital counseling sessions. Respondents independently completed the questionnaires after being informed of the study objectives and instructions. The completed forms were reviewed for completeness and consistency before analysis.

Instrument

The research instrument consisted of two parts: (1) demographic characteristics (age, sex, education), and (2) 20 knowledge-based items on healthy pregnancy preparation. The instrument was validated through expert judgment and reliability tested prior to use.

Data Analysis

Data were analyzed descriptively to summarize demographic characteristics and inferentially using the chi-square test to evaluate the relationship between educational level and knowledge, with a significance threshold set at $p < 0.05$. Results were presented in tables and figures to support interpretation.

Ethical Considerations

Ethical approval was obtained from the Ethics Committee of the Institute of Technology, Science, and Health RS dr. Soepraoen. Written informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study, and data were used solely for research purposes.

3. Results and Discussion

Respondent Characteristics

To provide an overview of the study participants, Table 1 presents the distribution of respondents by age, sex, and educational level. This description aims to illustrate the demographic profile of the 58 couples in the premarital stage who attended premarital counseling at the Office of Religious Affairs (KUA) in Haruai District, Tabalong Regency.

Table 1. Distribution of Respondent Characteristics

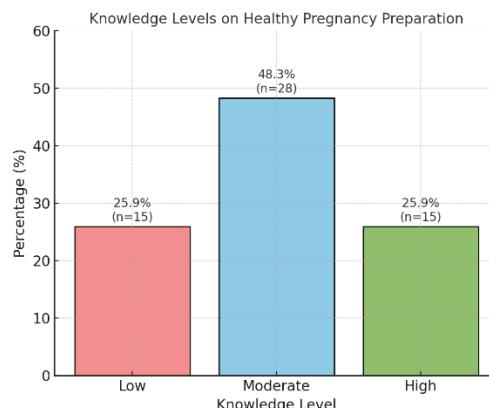
Characteristic	Category	(n)	(%)
Age	20–24 years	22	37.9
	25–29 years	20	34.5
	30–34 years	10	17.2
	≥ 35 years	6	10.4
Sex	Male	28	48.3
	Female	30	51.7
Education	Elementary/Junior High	12	20.7
	Senior High School	32	55.2
	Higher Education	14	24.1

As shown in Table 1, most respondents were between 20–24 years old (37.9%), followed by those aged 25–29 years (34.5%). The majority of participants had completed senior high school (55.2%), and the gender distribution was nearly balanced, with 48.3% male and 51.7% female.

Level of Knowledge Regarding Healthy Pregnancy Preparation

Diagram 1 displays the distribution of knowledge levels among respondents regarding healthy pregnancy preparation, categorized as low, moderate, or high.

Diagram 1. Distribution of Respondents' Knowledge on Healthy Pregnancy Preparation

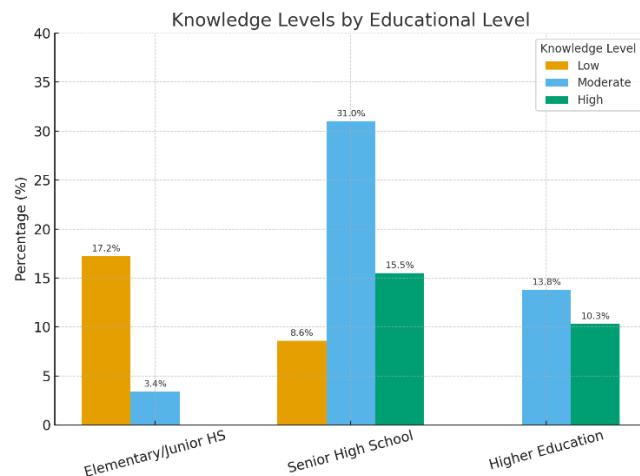


The results indicate that nearly half of the respondents (48.3%) had a moderate level of knowledge, while 25.9% demonstrated low knowledge and another 25.9% had high knowledge. These findings suggest variation in understanding, emphasizing the need for targeted interventions during premarital counseling to ensure adequate knowledge across all participants.

Relationship Between Educational Level and Knowledge

Diagram 2 presents the distribution of respondents' knowledge levels according to their educational background.

Diagram 2. Association Between Educational Level and Knowledge of Healthy Pregnancy Preparation



The data demonstrate clear differences in knowledge levels by educational background. Respondents with only elementary or junior high education predominantly had low knowledge (17.2%), while none reached the high category. By contrast, respondents with higher education showed a more favorable profile, with no participants in the low category and 10.3% attaining high knowledge.

Statistical Analysis

Table 4. Chi-Square Test Results

Variables	Chi-Square Value	df	p-value
Education Level × Knowledge Level	12.5	2	0.002

The chi-square test yielded a value of 12.5 with 2 degrees of freedom and a p-value of 0.002 (<0.05). This indicates a statistically significant association between educational level and knowledge of healthy pregnancy preparation. The results of this study demonstrate a significant relationship between educational level and knowledge of couples in the premarital stage regarding healthy pregnancy preparation. The data indicate that the higher an individual's educational level, the greater their knowledge related to pregnancy preparation. These findings are consistent with previous studies, which have shown that education is a key factor influencing one's understanding and attitudes toward reproductive health and pregnancy preparation (Rohmatika et al., 2021).

Theoretically, education plays an essential role in improving an individual's health literacy. A higher level of education provides individuals with greater access to comprehend more complex and relevant health information (Nunuk, 2022). In the context of pregnancy preparation, health literacy plays a vital role as it encompasses various aspects, including an understanding of nutrition, stress management, the importance of antenatal care, and relevant vaccinations for the health of both mother and fetus (Pertiwi et al., 2021). Good health literacy enables individuals to make more informed and appropriate decisions in planning for pregnancy. In Indonesia, reproductive health literacy still needs to be strengthened, particularly among couples in the premarital stage with lower educational levels, who may face limitations in understanding complex health information (Hartini et al., 2024).

The distribution of educational levels in this study shows that most respondents had a middle-level education (senior high school), followed by those with lower education (elementary/junior high school), while the remainder had higher education (college/university). These data illustrate that couples in the premarital stage with lower education possess a more limited understanding of pregnancy preparation compared to those with middle or higher education (Puji Utami, 2022). The higher proportion of moderate and high knowledge among respondents with senior high school and higher education indicates that higher educational attainment tends to enhance the ability to comprehend health information delivered during premarital counseling (Fitriani & Rusman, 2021).

These findings are relevant in the Indonesian context, where access to information and health literacy vary considerably according to educational background. According to the Indonesian Ministry of Health (2022), communities with lower education often face limited access to accurate health

information, due to financial and geographical barriers as well as limitations in comprehension (Mawaddah et al., 2023). This condition results in low levels of understanding regarding reproductive health and pregnancy preparation among communities with lower educational backgrounds, which may ultimately affect the overall quality of maternal and child health (Deni Diana Wati, 2022). In addition, the role of the Office of Religious Affairs (KUA) as the institution providing premarital counseling is crucial in bridging this knowledge gap. The KUA holds the responsibility of delivering basic education on reproductive health to couples in the premarital stage, although limited time and resources often pose challenges to providing information in greater depth (Atikah Sulastri, 2022). In this study, it was observed that couples in the premarital stage with lower educational levels tended to have more limited knowledge despite having attended premarital counseling. This indicates that the counseling materials provided may be less adaptive for individuals with lower educational backgrounds, thereby highlighting the need for more inclusive strategies that are easily understood by all groups of couples in the premarital stage.

It is important for the KUA to develop counseling modules that are accessible to couples in the premarital stage with varying educational levels. For instance, the modules can be designed in the form of leaflets or short videos using simple language and containing essential information related to healthy pregnancy preparation (Sari & Anggraeni, 2023). In addition, the KUA can collaborate with local health offices to organize supplementary counseling sessions or reproductive health education programs for couples in the premarital stage. This would help those with lower educational backgrounds to obtain adequate and relevant health information (Rika Listyowati, 2024). This study has several limitations, including its cross-sectional design, which cannot capture changes in knowledge over time, and its restriction to a single location (Haruai District), limiting generalizability. Future longitudinal and multi-site studies are recommended. Despite these limitations, the findings confirm that education significantly enhances premarital couples' understanding of healthy pregnancy preparation. Strengthening premarital counseling through adaptive, interactive materials and cross-sector collaboration is essential, and the results may serve as a basis for developing more inclusive reproductive health policies.

4. Conclusion

This study revealed a significant association between educational level and the knowledge of couples in the premarital stage regarding healthy pregnancy preparation in Haruai District, Tabalong Regency. The chi-square analysis produced a p-value of 0.002 ($p < 0.05$), indicating that educational attainment influences premarital couples' understanding of pregnancy-related health. Those with lower education (elementary/junior high school) tended to have lower knowledge, whereas those with secondary (senior high school) and higher education demonstrated better knowledge. These findings highlight the need to adapt premarital counseling materials at the KUA to ensure accessibility for all couples, particularly those with lower educational backgrounds. By adopting a more interactive approach and using simpler language, it is expected that all couples can acquire adequate knowledge of healthy pregnancy preparation, thereby supporting safe and healthy pregnancies.

Recommendations.

It is recommended that the KUA adapt premarital counseling materials to be more inclusive and accessible for couples in the premarital stage with varying educational levels. Interactive approaches such as the use of visuals, simulations, or short videos in simple language may help enhance understanding. In addition, collaboration with local health offices to provide supplementary sessions on healthy pregnancy preparation would further enrich the program, ensuring that all couples are well-prepared for a healthy pregnancy.

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